learning in Social Networks

- diffusion in network
- (complete) learning.

: see j adopted

$\Rightarrow \theta = H$

: see j not ..

- $\rightarrow$ j tried. low
- or $\rightarrow$ j choose not to try (maybe = see k not adopt)
- or $\rightarrow$ j not aware

Directed Path

π_{it} : prob i adopts by time t

$$\pi_{j,t} = \Pr(j \text{ test}) = F(\pi_i)$$

(? over $F(\pi_i)$)

$$\pi_{i,t} = \Pr(i \text{ test})$$

$$= 1 - \Pr(j \text{ not test}) \cdot \Pr(i -)$$

$$= 1 - (1 - x_{j,t}) \cdot \left(1 - \frac{4}{F}(1 - x_{j,t})\right)$$

↳ renormalize of $F(\cdot)$

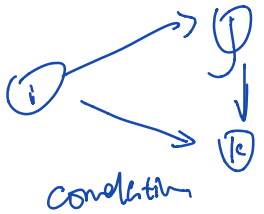
two forces { • wake up
• see others' decisions

can generalize to $x_{M'}^{-i}(x_{j,t})$

↳ one of my neibour wakes up

problem is, can't recover $x_{M'}$ from marginal adoption rate

e.g.



In large random network ⇒ everyone is connected with anyone else with same prob. ⇒ these difficulty disappears.